

DOCUMENT RESUME

ED 196 772

SO 013 053

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TITLE The Pause That Refreshes: A Study of the Discovery Corners in the National Museum of History and Technology Smithsonian Institution.
INSTITUTION Smithsonian Institution, Washington, D.C. Office of Museum Programs.
PUB DATE Aug 79
NOTE 65p.
EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS *Audience Participation; Educational Assessment; Educational Objectives; Experience; *Museums; *Nonschool Educational Programs; Participant Satisfaction; Program Descriptions; Program Effectiveness; *Program Evaluation; Surveys; Visual Aids
IDENTIFIERS Smithsonian Institution

ABSTRACT

This report examines the impact and effectiveness of an educational program (Discovery Corners) offered by the National Museum of History and Technology. The main objective is to offer feedback to museum personnel regarding the impact of museum exhibits and programs. The Discovery Corners program involves on-site presentations and demonstrations at selected gallery exhibits by trained docents. Fundamental to each presentation is the use of objects which allow audience participation. The study was based on evaluation of three Discovery Corners--a rehabilitation center, an electrical center, and a bicentennial center. Although each Discovery Corner has its own location, staff, and educational objectives, they are all the result of collaborative efforts by museum educators, curators, docents, and designers to offer visitors an opportunity to see and handle objects which are normally behind glass. Visitors were surveyed regarding what they did at the Discovery Centers, what they learned, their overall reaction, their ideas for improvement, and their suggestions as to whether the museum should provide more Discovery Centers. Analysis of the responses indicated that visitors appreciated the chance for audience participation and interaction with trained docents and that they thought there should be more Discovery Corners throughout the museum. Also, many visitors indicated that they felt a need for more advertising and more structure. The conclusion is that visitors find the Discovery Centers a valuable experience and that the Centers help meet the desire of museum visitors to learn through other ways than simple observation.

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THE PAUSE THAT REFRESHES:
A STUDY OF THE DISCOVERY CORNERS
in the
NATIONAL MUSEUM
of
HISTORY AND TECHNOLOGY
SMITHSONIAN INSTITUTION

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August, 1979

ED196772

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PREFACE

Audience participation is the wave of the future. It's the coming thing. People are curious about the latest inventions and participation is the best way. . . That little boy will never forget what he learned today.

My friends couldn't believe I was coming to Washington--they'll never believe this! being dressed as a soldier

How many times do you ever come across someone who can explain something? Not much anymore. Everyone has quick answers or no answers. This is different because the people seem very knowledgeable. Of course--you'd expect that in the Smithsonian.

INTRODUCTION

This study examines a unique education program offered by the Division of Public Information and Education in the National Museum of History and Technology. The program, entitled "Discovery Corners" involves trained docents who provide on-site presentations and demonstrations at selected gallery exhibits. Fundamental to each presentation is the use of objects which allow "hands-on" participatory experiences for the visitor. The focus of this investigation was to explore the impact and effectiveness of the Discovery Corner experience. Three separate Discovery Corners, each with its own location, staff and set of educational objectives were studied. The emphasis in this report however, is directed to the viability of the concept of Discovery Corners rather than the specific impact or effectiveness of any one Corner. Initially, we were concerned that the variation among the three Corners would not allow generalizations about the concept itself. Detailed study of the Corners indicated that although all three appear (and are) different, each holds true to the utilizations of objects and spontaneous interaction with a museum representative. As such, the Corners are more alike than different. The variation in subject matter, structural design, presentation length, docent presentational style, and educational aim served to enhance the scope of the study. Because of these situational variables we were able to examine the impact of the concept under a wide variety of conditions.

The museum opened its first Discovery Corner--The Spirit of 1776, located in the Armed Forces Hall--as part of its bicentennial year celebration. The Electricity Discovery Corner, located in the Electricity Hall was initiated in 1976. And a Rehabilitation Discovery Corner, located in the "Triumph Over Disability" section of the Hall of Medical Science began in the fall of 1977. The three Corners, as they now function, are the result of the collaborative efforts of museum educators, curators, docents and designers. The corners are a working example of an educational program operating as a result of input from multiple departments within the museum. In a general sense, each of the Corners was designed to offer visitors an opportunity to see and handle objects which are normally behind glass. The distance created between objects in glass cases and the visitor has posed a dilemma for museum educators attempting to provide persons with a rewarding and involving museum experience. The education staff of the National Museum of History and Technology evolved the Discovery Corner concept in the hope that they would bring historical objects "to life" for their publics. An early memo describing the concept of Discovery Corners states:

" . . . the person staffing the booth would use the objects and pictures to bring alive the halls. Visitors would thus be allowed to handle certain objects. . . If the general public is able to touch these objects and reproductions of period pieces, and is able to carry on a dialogue with a well trained docent or staff member, their museum experience will be more

useful, valuable, and exciting."

Thus, the Discovery Corner idea rests on two essential factors: (1) the manipulation of objects by visitors; and (2) the opportunity for spontaneous interaction between the museum visitor and a trained museum representative. The Discovery Corners have been designed to maximize the occurrence of these important factors. Each Corner has been supplied with a set of authentic objects as well as reproductions of certain objects. Trained docents introduce visitors to the objects in the Corner by offering a structured presentation. The presentations are based on information provided by various museum curators and other specialists. During the course of the presentation visitors are invited to handle objects and to ask questions. Discovery Corners are designed to attract casual visitors and family groups--two visitor groups often neglected in the formal educational programming of the museum. Although it is hoped that visitors will develop specific insight while visiting the Corners, the primary goal of the program is more general. A Discovery Corner is not a special exhibit within the museum. Rather it is an interpretive program designed to amplify and complement specific exhibit areas within the museum. As such, the program is aimed at helping the average visitor feel closer to the museum by offering greater involvement and participatory experiences.

Certainly, The Discovery Corner concept would be difficult to justify if some content information was not gained by its participants. In addition to the transference of specific information, the Discovery Corners are an attempt on the part of the museum to offer visitors a broader understanding of life styles and the history of technology. This is an aim which is congruent with the overall philosophical thrust of the museum--providing an understanding of history through examination of artifacts, patterns and culture.

The present study is part of an on-going commitment of the Department of Psychological Studies, Smithsonian Institution to provide both evaluation counsel and evaluation feedback to individual Bureaus interested in exploring the impact of their programs and/or exhibits on the public. As with all of our other recent work at the Smithsonian, a significant aspect of this study is to provide the National Museum of History and Technology staff with information that can help guide meaningful action leading to improved practice. It is our view that if systematic study does not play a facilitative role in program planning and exhibit development then it is probably not worth the time and energy it takes to conduct it. Because this exploration has been designed to enhance programmatic decision-making, the primary audience for this document is the NMHT staff. It is for this reason that we took considerable time at the outset of this study talking with museum educators, curators and docents to solicit the specific questions they hoped the study would consider. Their questions ranged from specific concerns about a particular Corner--"Do people come away with a definition for 'rehabilitation'?" to more global questions about the Discovery Corner concept--"Does this method of presentation generate a sense of excitement about the museum as a whole?" Specifically, the research interests of the museum staff

are reflected in the following questions:

- (1) What is the influence of a museum representative on the feelings visitors have toward the museum experience and the amount and kind of learning taking place?;
- (2) What segments of the museum audience are best served in the Discovery Corner?;
- (3) Are people learning through objects--are visitors stimulated to see more and to linger longer in the immediate exhibit area?; and
- (4) Do visitors come away with a feeling that learning can be fun?

In addition to questions about the viability of the concept, various staff members also had questions about the effectiveness of the location and design of the corners, the accuracy of information, and effectiveness of the presentational techniques employed by docents.

To address all of the staff concerns, we engaged in protracted observations aimed at documenting the operations of each of the three Corners. Furthermore, we asked visitors general questions which were followed by a variety of specific probes. The broad questions were as follows:

- (1) What did you do at the Discovery Corner?
- (2) What did you learn?
- (3) What reaction do you have?
- (4) Do you think that the museum should provide more Discovery Corners?
- (5) What would you like to see in a Discovery Corner?

We refer to the methods employed in this study as Naturalistic Evaluation. They are naturalistic because we observe and interact with persons as they engage in their visit. We approach them naturally; we engage them in natural conversation and we document natural behavior. It is evaluative because we ask the visitor to assess the quality of his/her experience and to comment on what personal meaning the visit stimulates. This strategy of combining observation and interview procedures has proven to be extremely helpful in revealing aspects of visitors' experience, and the kinds of cognitive and affective impact these experiences provoke. Our role is to portray these observations and expressions in such a manner that they are both comprehensive and usable by those who have responsibility for exhibit planning and program formulation.

We remind the reader once more that this is not a report about

¹See attached bibliography of completed studies employing this technique.

each of the Discovery Corners as a separate entity--this report describes the impact of the Discovery Corner concept as it is actualized through the three corners presently in operation. The section of this document reporting Attendance Data describes the visitors and attendance patterns of those who comprised our sample. The Impact section presents data gained through observations and interviews. The final section of the report, Areas for Consideration, combines suggestions from visitors with our own professional expertise to identify topics for continued consideration by the department staff. A brief explanation of study methods employed precede the major sections of the report.

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This study represents our first impact study in NMHT. Previous studies conducted by the Department of Psychological Studies have examined the impact of specific museum exhibits, and in one case, the impact of an entire institution. This study affords us an extended opportunity to explore a unique educational program. The effort represents a commitment on the part of the NMHT to consider what impact their programs have on the public and to generate insight as to how programs can become more responsive to the public's expectations and to visitor information needs.

It must be noted that each person reading reports such as these may interpret them differently. Some will agree with our inferences and suggestions and some will not. We see each report as an instrument to stimulate staff discussions. "Real" evaluations take place by the persons who have the most at stake--museum administrators, designers, curators, educational staff, etc. The presentation of information, such as that found herein is aimed at provoking discussion and planning sessions among the museum personnel themselves. It is hoped that this documentation can help guide self-assessment and decision-making activities.

METHODOLOGY

As stated the methodological approach guiding our work is referred to as Naturalistic Evaluation. Evaluation strategies are naturalistic if they (1) orient more directly to current and spontaneous activities, (2) respond to staff and visitor interests in different kinds of information, and (3) account for the different values and perspectives that exist whenever the question of impact is introduced. Naturalistic Evaluation takes a broad, holistic view of the program, exhibit, or institution; it is more interpretive than judgemental, and requires participation from a wide range of people who are to be served by the study effort. It is a dynamic inquiry process demanding extensive interaction between evaluator and participants. In this sense, data collection episodes (observations, interviews, etc.) require documenting natural behavior and initiating natural conversations. Most important, Naturalistic Evaluation depends upon relating behaviors and expressions to the context in which they arise.

Naturalistic Evaluation is predicated upon the belief that in order to best serve people involved in or affected by museum programs and exhibits the process must guide and inform the decisions that need to be made. It is aimed at understanding what impact programs and exhibits have upon the public. To gain this understanding, the process must invite the visitor to describe his experiences, assess the quality thereof, and comment on the meaning of those experiences to him.

Naturalistic Evaluation is aimed at a search for meaning. In seeking this meaning, Naturalistic Evaluation elicits, considers, and builds upon the in-depth information that is provided by the behaviors and responses of its many respondents. The final data interpretations attempt to portray and illuminate the configurations of meanings that exist.

The following procedures were employed in the present study in carrying out the Naturalistic Evaluation approach:

(1) Negotiations for the study were initiated by the Department of Psychological Studies with the Director of the Division of Public Information and Education at the National Museum of History and Technology. These negotiations concerned the study's over-all purpose as well as certain procedural matters such as time frame, etc.

(2) An investigation team was assembled and was coordinated by the Director of the Department of Psychological Studies with the assistance of a senior methodologist. The team also included three graduate interns working with the Department of Psychological Studies.

(3) Fact-finding interviews were conducted with the staff of the Division of Public Information and Education, curators for each Discovery Corner and other relevant NMHT staff and volunteers to solicit background information on the program and to generate initial questions that the study could focus on.

(4) A meeting was held with docents currently working in the Discovery Corners. The purposes of the meeting were to introduce the study staff to docents; to outline the focus of the study; and to elicit additional information for use in formulation of study questions.

(5) Preliminary observations of visitors were completed so as to identify possible study issues based upon recurring demonstrable behaviors.

(6) Preliminary debriefings were held with investigative team members to develop a tentative structure for the study based upon all the information amassed up to that point.

(7) An observation protocol was developed and pilot tested for completeness.

(8) Systematic observations began and focused upon the observation protocol identified in step 7.

(9) Regular debriefing sessions with the investigative team were initiated so as to generate alternative questions, explore different inferences, and discuss emerging data patterns.

(10) Preliminary interviews with visitors were initiated to identify additional study issues based upon visitor expressions.

(11) Final study focus was developed.

(12) Intensive data collection began--including observation strategies; formal and informal interviews with both visitors and docents.

(13) Regular debriefing sessions with investigative team members continued with a focus on tentative data analysis, validity cross-checks, problem identification, and new data considerations.

(14) Formal analytical phase was initiated to articulate emerging themes, identify consistencies and inconsistencies in data, develop a data categorization structure and discuss tentative explanations.

(15) Final analysis and report preparation were completed.

(16) A final debriefing was held with NMHT staff to explain findings, respond to questions, and discuss new study directions and implications for planning and development.

The study encompassed five months from the initial set of negotiations to the final debriefing session. The data reported here are based on formal interviews with well over a hundred visitors to the Corners. Numerous other, more informal interviews were conducted with NMHT staff, volunteers and visitors. Additionally, several hundred hours were devoted to systematic behavioral observations aimed at documenting the way visitors behave in the Corners. These observations focused on verbal and nonverbal actions, tracking visitor flow patterns, documenting encounters with specific objects and examining visitor interactions with docents and with fellow visitors.

Data collection episodes occurred in all three Corners, covered each day of the week, and included observation of every docent working in a Corner during the period of the study.² Unlike exhibit halls, which are open to the public more than seventy hours each week, the Discovery Corners operate an average of eighteen hours in any one week. Thus the number of visitors to the Corners is significantly less than the number of visitors to a given exhibit hall within the museum on a day. We have, therefore, conducted fewer formal interviews during this study than is our normal practice. We have, however, identified a representative sample of the visitors to the Discovery Corners as well as a sample which is proportionately equivalent to the samples in past studies.

As with other studies we have completed we have carefully separated our own perceptions and expressions from those of the visitor, and where we have made suggestions they are clearly identified as our own. The report contains many natural language statements that were expressed to us during our interactions and conversations with visitors and docents who responded to our questions. In addition, our observation data is a direct recording of natural behaviors and spontaneous expressions. It is our view that nothing portrays the museum experience more dramatically than the behaviors and the comments of the visitors as they express them.

²Observations began during March and continued through May. It is important to note that the Electricity Corner was frequently closed or unstaffed during data collection episodes. Consequently, information on this Corner is not as extensive as the other corners in the present report.

ATTENDANCE DATA

Audience Description

Our data reveal that the typical audience for a presentation at the Corners is a mixed one. Family groups and adults predominate. Beyond this, there is no significant trend in terms of age or sex. There are somewhat fewer adolescents and senior citizens who attend the Corners, however they are not conspicuously absent. It is of interest to note, however, that families and single adults are most likely to remain for more of the presentation than any other visitor category.

Persons of varied background and interests were drawn to the Corners. A wide range of occupations were represented. Various races and socioeconomic groups were also in attendance. The only trend in visitor interest occurred at the Spirit of 1776 where we encountered more persons describing a particular interest in history which accounted for their participation. (Visitors expressed no such interests in science or rehabilitation at the other Corners.)

Audience Pattern

The Discovery Corners are in operation from 11:00 a.m. to 2:00 p.m. on Tuesday through Saturday of each week. Thus, visitors have the opportunity to participate on an average of three hours each day. Visitors arrive at the Corners under three conditions:

- (a) Some of those at the Spirit of 1776 Discovery Corner have seen the posters displayed in the museum. Only one visitor stated that he had seen the titles of the Discovery Corner on the Information Board located at the second floor entrance.
- (b) A small percentage of visitors have come quite intentionally. Some have visited previously; others have come upon a friend's recommendation.
- (c) Most are spontaneous participants. They have unexpectedly encountered a Discovery Corner and then made a decision whether or not to remain.

Many of the people who do participate in a presentation join in after the presentation has begun. In other words, it appears as though most visitors do not come looking for the Corners. Rather, they appear to be engaged in touring the museum's exhibit halls, and then become intrigued with the presence of a person engaged in a presentation. Visitors do not read the signs hanging overhead which label the areas Discovery Corners. Most people become members of a Discovery Corner audience not by looking for it or reading about it, but rather by seeing one in action.

Generally, curious people will stop on the periphery of the corner

for an average of one or two minutes and then resume their original path through the exhibit halls. Occasionally, a person stopping after a presentation has begun will find a seat and stay for the remainder of the presentation. Seated visitors tend to view a presentation for a longer period than those who stand on the periphery. During any one presentation as many as fifty people may have been exposed to some portion of the material presented. Thus, the audiences in the Corners are fluid. It is not uncommon for a docent to begin a presentation with five people and end the presentation with eight entirely different people--having had twenty or thirty people move in and out of the Corner during the twenty minute period.

One exception to the general pattern of unplanned participation is the school groups who attend The Spirit of 1776 Discovery Corner with their docent as part of the "Concord to Yorktown" tour offered by the museum. This school tour takes place on weekdays from 11:00 a.m. to noon everyday of the week when school is in session. Rarely do casual visitors to the museum attend the 1776 Corner during these planned sessions. The Corner is full--all chairs are occupied, and the presentation is paced for the children. (On occasion each of the Corners has been opened before its scheduled hours to provide a complete presentation for a school group.)

Attendance at Discovery Corners is sporadic. There are times when a docent will wait as long as an hour for a visitor wishing a presentation, and there are times when presentations begin at 11 a.m. and go beyond the 2 p.m. closing because of continued visitor interest. Generally speaking, several factors influence attendance in a corner. Two critical factors are the location of the Corner within a hall and general attendance in the hall adjacent to the Discovery Corner. For example, there are periods of time when no people visit the farther reaches of the Armed Forces Hall, and quite naturally, those periods of time correspond to the low attendance in the Spirit of 1776 Discovery Corner. On the other hand, the Rehabilitation Discovery Corner and the Electricity Discovery Corner are centrally located in well-traveled halls. Throughout our extensive observation sessions we never witnessed docents in these corners waiting for long periods of time for an audience. When there is traffic in the nearby exhibit halls, there is no difficulty in acquiring an audience of interested visitors for a Discovery Corner presentation.

Visits to the Discovery Corner range from one to forty minutes. Most common are visits from two to five minutes or visits lasting from twenty to twenty-five minutes.

There are more visitors to the Corners during the weekend, just as there are more visitors to the entire museum during the weekends. Our analysis indicated no significant difference in visitor behaviors or reactions based on time of day or day of the week of the visitation.

As stated, the purpose of this report is to describe the impact that

participation in a Discovery Corner has upon different visitors based upon our systematic observations of and interviews with a wide and diverse range of persons. We observed all aspects of the Corner experience --from initial indication of interest in the specific Corner to the behaviors of visitors immediately after their exit from the Corner. All interviews occurred with people that we observed. Thus, many of our questions related specifically to our observations--including general and specific behaviors related to aspects of the Discovery Corner presentations that appeared most interesting to visitors. We began with specific questions about a visitor's behavior and then progressed to more abstract questions about what he/she had learned and what his/her perceptions were of the Discovery Corner concept.

A critical distinction between typical behaviors or responses is made throughout this section in the reporting of information. When natural language quotations and reports of behaviors are included they represent typical kinds of actions and statements. If a statement or behavioral report is atypical, it will be identified as such. Also, in presenting aggregate information the decision was made not to tabulate percentages of the different kinds of behaviors and responses offered by visitors. It is our view that once numerical ratings are assigned to naturalistic data, misinterpretation can occur. Rather, we have intentionally used adjectives such as most, many, some, few or none to help portray aggregate tendencies. The term "visitors" implies that almost everyone was in agreement.

The observations which were conducted encompassed two broad areas: (1) docent activities in the Corner and the way these activities are reacted to by the visitor; and (2) visitor activities with objects in the Corner and the way visitors are responded to by the docent. These interactions served as our unit of analysis. For example, documentation of various ways in which docents began a presentation became far more informative when it was supplemented with data describing differential responses of visitors to such introductions. Hence, for each docent behavior observed, we simultaneously noted and recorded the response (in behavioral terms) of the visitors present. The same procedure was followed in examining visitor behavior. Each behavior or series of behaviors was recorded with the accompanying responding behaviors of the docent.

Based upon the observations conducted in the early phases of investigation, we identified three phases of visitors' experiences in a Discovery Corner. These phases are (1) the development of interest in the Corner; (2) participation in the presentation itself; and (3) the manner in which visitors exited the Corner. There is a distinct set of behaviors and reactions characterizing each of these phases.

The discussion of these reactions and behaviors is organized into two data categories--Observation Data and Interview Data, and will be presented in the sections of the report which follow.

IMPACT DATA

OBSERVATION DATA

Developing Interest in the Corner

The feature which most consistently drew persons to the corners was the prominent display or demonstration of an engaging object. Each of the Corners has at least one such object. In the Spirit of 1776 the musket has great attracting power. Visitors seeing a demonstration of the musket invariably stop--if only for the duration of the musket presentation--to watch and listen. Visitors are also attracted to the soldier's shoes when they are presented. This same curiosity and level of interest was not evident when other items such as the hunting shirt or canteen were shown. In the Rehabilitation Corner, the artificial limbs compelled many visitors to stop. Just the presence of these objects on the demonstration cart drew the interest of passers-by. The static electricity experiments typically attracted strolling visitors at the Electricity Corner.

Direct efforts by a docent to entice visitor participation was the second most common way for a visitor to become interested in a Corner. Docents exhibited a repertoire of strategies to interest would-be participants. In attempting to put the visitor at ease and to make all people feel that they are welcome in the Corner, some docents take on the posture of a hostess--inviting visitors into the area and granting them permission to explore and to ask questions. It is common to hear docents approach visitors in a manner like:

Would you like to come in and see what we have?

Please feel free to come in and join me. You are welcome to look around.

Want to have a seat and we'll have some fun with these things?

It is not uncommon to find the docent's invitation declined. One father responded:

Thank you very much, but I don't think we'll have enough patience with these little ones. They are quite rambunctious.

Typically the invitation is graciously acknowledged and freely declined. People often express concern over not having enough time during a short visit to Washington for an involving stop. In the capacity of hostess, the docent will, on occasion, guide the visitors to sights both in the Smithsonian and around Washington, e.g. the First Ladies

Gowns, the Department of the Treasury, the Museum of Medical Science at Walter Reed Hospital.

Another strategy employed by docents as they try to develop an audience is the recognition of a need for a rest or a change of pace. A docent may ask a visitor, "Are you tired?" This question leads to a brief discussion of the enormity of the museum and an introduction to the idea of the Discovery Corner presentation. Expression of an empathic understanding of the visitor's need for a place to sit and relax was an effective approach for gathering an audience especially after the noon hour.

Some docents initiate interactions based on the general subject matter of the Corner. Docents might begin by saying: "Are you interested in a presentation on prostheses?"; or, "Can I show you some things from the Revolutionary War?" Or, "If you will just wait a minute I'll show you some experiments first done by Benjamin Franklin."

Visitors usually approached the docents and the Corners in a timid manner. Rarely did a person touch an object without first being encouraged to do so by the docent. In fact, on several occasions we heard parents telling their children, "Don't touch!"--only to have the docent explain that this was a place where anyone could touch anything they wished. For the most part, adults did not touch the objects. Typically a person would approach the Corner, look at objects, point to objects and perhaps talk to the docent.

None of these approaches to the visitor are foolproof. An uninterested visitor will usually thank the docent and move along. Rarely did visitors request a presentation.

The Presentation

In examining the nature of presentations in Discovery Corners we have focused on both the behaviors of the docents and the behaviors of visitors. Our observations of docent behavior included the following:

1. The Subject-Matter Selected for Presentation

- selection of information
- ordering of information
- general theme statement
- accuracy of information

2. The Mode of Presentation Selected

- inquiry method (types of questions posed to the audience)
- lecture method
- lecture/demonstration method

3. Use of Objects During a Presentation

- object selection
- discussion of objects
- handling of objects
- presentation of objects to visitors

The subject matter selected for presentation by docents is dictated by the purpose of the Corner. Yet, after many hours of observation, it became apparent that although each docent gave a personalized presentation in terms of content, for any one Corner the presentations were far more alike than different. Thus, we will outline a typical presentation as one would encounter it in a Corner. By typical we mean that barring any extraordinary circumstances, this is the most likely presentation a docent would offer an audience in this manner. Modifications occur on a fairly regular basis and common modifications will be indicated.

Rehabilitation Corner

Subject Matter Presented

The presentation begins with a definition of rehabilitation and continues with a discussion of aids available to the blind, the deaf and the physically handicapped. Docents conclude by either calling attention to the handmade limb of the South Carolina farmer or by explicitly stating the theme of the Corner--acceptance--as it is represented in the figures from the Wizard of Oz which decorate the Corner.

In beginning the presentation, many docents use the term "prosthesis"

or "prosthetic devices." While some define these terms, explaining that a prosthesis is a replacement for a missing body part, many docents use the term without defining it. Our discussions with visitors indicate that they do not come to the Corner knowing what "prosthetic" means, and in fact, visitors leave the Corner referring to the limbs as artificial arms and legs.

The first area normally discussed is aids for the blind. Docents begin by showing the folding prescription cane explaining the means by which a blind person probes the atmosphere using the cane as an extension of his or her index finger. Usually, the docent will take this opportunity to give the audience instructions for the proper way to assist a blind person:

- announce yourself and ask the person if he or she would like assistance
- walk one-half step in front of the person you are guiding
- walk in your normal manner

Most docents explain the information for the blind while they maintain sole possession of the objects, namely the cane. There are only rare occasions when so early in the presentation the docent feels she has the luxury of spending time with visitors trying their hand at walking with the cane. During our initial observations, docents were simulating blindness for visitors by blindfolding them, but this practice was stopped and did not resume during the period of our observations.

While talking about blindness docents include the following information:

- Braille was adapted from a military code by fifteen-year-old Louis Braille.
- The blind can participate in a wide variety of sport activities: skiing, jogging, baseball, etc.
- Some famous movie and television stars have lost an eye, and now function adequately.

The story of Louis Braille and his successful attempt to modify the 12-dot system of the French military code into the 6-dot system used in braille is the one story consistently told during the presentation.

Hearing disabilities is the next topic of conversation and is typically the shortest segment of the presentation. The major subject matter content is about sign language, although hearing aids and total communication are mentioned.

The information on prosthetic devices modeled for missing arms, hands and legs is the special feature of the Rehabilitation Discovery Corner presentation. The docent will generally begin by describing the method by which a person has a prosthesis custom fit and the procedures necessary for learning how to use an artificial limb so that it will be most functional. Cosmetic prostheses are then discussed. The docents are split on two messages which they offer on this topic:

1. 'Naturally, just like you want to look your best when you go out, so does a person with a handicap. It's a very natural thing. Many people will wear a cosmetic hand for special occasions.'
2. 'People who have a handicap wear cosmetic prostheses to make non-handicapped people feel better. The handicapped really don't care, but we haven't learned yet how to accept these people for who they are.'

The remainder of the presentation consists of showing how various artificial arms and legs operate. The docent will discuss the materials used for construction and the functions a person is able to perform with the aid of the device.

Mode of Presentation. In the Rehabilitation Discovery Corner nearly all docents proceed from a show-and-tell format. Rarely is a docent talking when she does not have an object in her hand. Most of the content information is geared directly to the objects in the Corner's cart. Thus, the docent talks about aids for the blind while showing the walking cane and passing out cards with braille characters. Docents in this Corner attempt audience participation primarily through use of volunteers to try walking with a cane and to try opening and closing the hook at the end of the mock arm.

Children were far more likely to volunteer operating the mock arm than were adults. And in fact, most docents make the offer of trying to children--not to adults. There is a general sense that children are more receptive to the experience than are adults. Several docents put it this way:

- On Saturday I had Boy Scout troop after Boy Scout troop--I was in heaven. They are so interested.
- I gear my presentation to the kids, and I find that the adults become more interested. I think they like seeing the one-on-one interaction with me and the kids.
- I have learned that adults don't like to be taught. So I show them the things that we have, and I answer their questions.

The docents remain flexible in presentational style depending on the audience. Most take care to speak in a manner understandable to children, when children are in the audience, although we have witnessed on more than one occasion words like "ostracized," "congenital," "membrane instrument," "capacitor," "armories," and "mercenary" being used in a presentation to children no older than eight.

Occasionally, docents allow visitors to direct the style of the presentation. One atypical presentation found a docent speaking with two women with masters degrees in physical handicaps. The docent provided a presentation on "what we tell the public here at the Smithsonian." When a regular audience began to gather, the docent fell back into a typical presentation leaving the professional women to see a presentation.

Use of objects

The Rehabilitation Corner operated on a show-and-tell format regardless of the docent giving the presentation. As a docent would take an object from the cart she would tell the audience its name and would then proceed to demonstrate how it was used. With the exception of the artificial eyes and the hearing aid, objects used in this corner have moveable working parts. Docents move the parts while explaining how a prosthetic device is fitted to a particular user and how it operates to assist the person.

As noted earlier, visitors are often attracted to the Corner after noticing an artificial arm or leg on the display cart. Although initially attracted by curiosity, visitors display behaviors which indicate some discomfort with the objects. Children will see the eyes, for instance, and pass them to the next person as quickly as possible. Both adults and children laugh nervously as they come close to one of the objects or as one person actually tries to operate the mock arm.

Visitors do touch these objects, and there is usually considerable interest in trying to operate the mock arm. The encouragement of the docent usually results in more people in an audience attempting to operate the arm, as was the case with other objects available for inspection. On the other hand, if a docent mentioned little about the qualities of an object, it was passed rather swiftly from one person to another. Visitors did not squeeze objects or look into them--they examined only the outside of the objects.

Visitors generally have little personal experience or knowledge to bring with them to the Corner. Frequently initial reactions to a limb will be, "Oh, wierd." or "How gross." These are comments which seem to spontaneously come from visitors as we watched them approach the Corner or interact with one another when the docent was not in the immediate vicinity. These reactions were not usually given to the docent and were rarely expressed to us in our interviews.

Some visitors appeared in awe of the objects. "These are so neat!" remarked one young boy. There were several "amazings" as visitors were told about the qualities and functions of the objects.

Except for the braille and sign language cards, there was a great deal more visitor interest in the objects related to the physically handicapped than there was for the material on the blind and the deaf. Indeed, fewer objects were used for presentations about devices for the blind and the deaf. The ball with the audible bell created interest, but long explanations about the TTY machine which was not available for examination created little interest.

Visitor Reactions

The experience in the Rehabilitation Corner is one of exposure to new and different things. The reactions of amazement, puzzlement and interest in the small details would seem to indicate that most visitors are encountering prosthetic devices for the first time at close range.

Clearly, it is the artificial arms and legs which engage the visitors most intensely. People pay close attention to the docent as she demonstrates these objects--and there are often raised eyebrows, shaking heads and audible "oohs" and "ahhs" as visitors react to these objects.

More so than in the other Corners, visitors seem to develop an awareness as they handle the objects here. For instance, many docents will encourage people to close their eyes and try playing catch with the audible ball. Inevitably the volunteer will make a comment like that of one young boy, "Hey, this is hard to catch. I guess you have to learn how to do it." The same awareness of the need for training is most evident as visitors attempt to read braille or form the letters of the manual alphabet. The task is approached as an easy one--only after several false starts does the realization of the need for acquired skill seem to emerge.

Occasionally someone will come to learn that something is not what

it appears to be. During one presentation a docent brought one of the artificial legs over to an audience member for her to feel. The woman touched the leg and announced, "Oh, I thought it was hard plastic." Apparently, so did several of the other audience members. What ensued was considerable interest on the part of others in the audience. Persons then took turns squeezing the leg and commenting on its structure. One woman who had been sitting at the edge of the audience actually got up, moved herself closer to the leg and took considerable time examining the leg. This exploratory behavior in adults was nearly always a direct response to the modeling behavior of the docent. The incident just reported took place after the leg had already been passed through the audience for the first time. The nuances of the equipment were often a surprise. "My God," commented a woman as she was told to look for the simulated hair on the cosmetic hand.

Children were a bit more exploratory with the objects following the encouragement of their parents. It is nearly always a child who tries to operate the mock arm. The arm is actually fitted for an adult, but only after much cajoling from a docent or companion will an adult experiment with the arm.

Several times we saw parents remain with their children after the presentation. During these sessions the children would close their eyes and attempt walking with the cane, would guide one another on walks and would study all of the objects at close range.

There was much chuckling as volunteers would attempt performing activities as though they were blind or missing an arm. Persons attempting to guide themselves with the cane would appear quite serious--visibly working hard at trying to accomplish the task. The same determination was often apparent in watching a person attempting to open the hook at the end of the mock arm. Naturally, none of these volunteers was adept with the tools and they fumbled with even the simplest tasks--often wanting to try again and again until able to pick up a sheet of paper, for instance. The behaviors of the volunteers and the open responses of ridicule by companions struck us as a simulation of the early experiences of many handicapped persons. This point was not raised by docents, and reactions to objects or performances were never discussed.

For some, this experience of inadequacy seems to stimulate an interest in learning more. Several people asked how they could learn sign language. We have even seen people throughout the museum practicing the manual alphabet with the assistance of the cards passed out at the Corner.

Questions abound in this Corner. They are sometimes technical questions about the construction of the devices or perhaps a simple question prompted by the story of Louis Braille -- "How did that boy get blind?" A young boy was fascinated with the audible ball and wondered how the bell was placed inside the ball. Most often the questions asked in the Corner related to the use of the objects by the handicapped. The questions asked by visitors reflect a developing awareness of the concerns of the handicapped. The following is a sampling of questions posed by visitors during a presentation:

- Visitor: "Is there much limitation of movement with that leg?"
- Visitor: "What about perspiration -- is it a problem?"
Docent: "Could wear a light sock with it."
- Visitor: "It seems like there would be so much pressure..."
Docent: "But the pressure adds to the control the person has."
- Visitor: "Does Kennedy's son have an artifical leg?"
Docent: "I don't know -- but he does ski."
- Visitor: "You've talked about the blind and about the hard of hearing. What about people who are both blind and hard of hearing? Many elderly would fit in that category."
- Docent: "There are books, tapes and teletype; but there is really no solution for the double problem."
- Visitor: "When Louis Braille was developing braille, how did he know what he was comparing his letters to since he couldn't see?"
Docent: "He could talk with people."
- Visitor: "If a blind person came here to the museum, could he touch everything?"
Docent: "No -- objects would get damaged."

Visitors to the Corner also share information. One told of a new machine which transfers printed material into braille; a medical student from Germany discussed the new materials being used for prostheses in Europe; a woman confirmed to a wheelchair suggested contacting the Trotter Hospital (Hawaii) for rehabilitation information. Occasionally someone will seek advice about a personal problem. In those instances, docents responded by identifying information available in the Corner, in the surrounding exhibit, or suggested that the individual seek out a medical expert.

Spirit of 1776 Corner

Subject Matter Presented

There were two general themes which continually emerged in the presentations at the 1776 Discovery Corner. Some docents emphasized the life and times of the citizen soldier while others focused solely on the individual objects. The latter presentations introduced objects which would have been used by the citizen soldier. Typically, the more complete presentation about the citizen soldier was presented to groups of school children. The object-governed presentations were given to single visitors who passed through the Corner expressing interest in one object. Visitors would point to an object and the docent would identify it and explain its use.

The 1776 Corner presentation is supplemented with a good deal of storytelling as background information. Throughout the presentation docents use terminology which is historically and technically accurate. Visitors, however, continue to use more familiar jargon, e.g. "gun" for "musket."

Mode of Presentation

Docents in the 1776 Corner used the inquiry method of presentational style. They consistently tried to encourage participation from audience members by asking these visitors to supply answers to a series of questions. "Does anyone know what this is?"; "How do you think this would be used?" are frequent questions in the Corner. Generally, this technique does elicit responses from the audience, but the success of the method varies. The most successful approach is that of posing questions and then allowing a variety of responses. This is followed by a discussion of the rationale for certain guesses leading to a logical conclusion for the "correct" response. These procedures stimulate continued participation from the audience. Both children and adults are addressed by the docents. If the audience is primarily adult, additional background information is supplied. Questions from the audience during the presentation generally pertain to the object being shown, e.g. "Did the soldiers use any bullets like we use now?"; "Which canteen did the Americans use?"

Docents create an informal atmosphere in which many visitors appear comfortable. Frequently, a visitor will stay with a docent to discuss his or her own interest in history. History buffs tell of their participation in reenactments of famous battles and stories of family figures involved in the Revolution are shared.

Use of Objects

As noted earlier, docents in this Corner utilized an inquiry approach to the presentation of material. Thus, an object would be taken from the platform and shown to the audience members with an accompanying question: "Does anyone know what this is?" or perhaps, "Can anyone tell me how this works?" "Which canteen did the Americans use?" and in the case of the shoes, "Does anyone notice anything specific about these shoes?" It is the rare audience member who supplies any correct answers to these questions. During the entire questioning process the objects remain with the docent. If the audience does not identify the object on a few trial guesses, then the docent supplies the information and passes the objects through the audience so that members can look at them more closely.

One docent we spoke with does not pass objects during her presentation because she feels that they serve as a distraction for people who are trying to listen to what she is saying about a new object while holding something discussed earlier. She reserves touching for the end of the presentation. The usual experience for a visitor in the Corner is multi-faceted--requiring examination of an object held at the moment, listening to information about the object being discussed by the docent and talking with members of his or her party about what they are touching.

There are many objects available to the docent in the "1776 Corner." Few presentations include all objects. A typical presentation will include the following:

- hunting coat
- shoes
- canteens
- cartridge box
- haversack
- cooking kettle
- food rations
- tinder box
- flintlock musket

During the presentations for school groups one child (usually male) is chosen to be a citizen soldier. This youngster wears the coat and accompanying equipment. For adult groups the objects were shown, discussed and passed through the audience. Any person expressing interest in trying on the clothes or operating the equipment was encouraged to do so. The majority of visitors looked without operating any of the equipment.

Some presentations were longer and more elaborate. The length depended on the interest level of the audience and willingness to stay at the Corner. Supplemental objects used in the Corner included: (a) replica of George Washington's uniform; (b) tri-cornered hat; (c) recreational objects (dice, playing cards and musical instruments).

Often docents would refer to the prints of Monmouth, N.J.; Guilford Courthouse; Vincennes, Indiana; Trenton; Bunker Hill and Yorktown to illustrate the way in which citizen soldiers fought in battle. The objects mentioned above are the ones used with the greatest frequency in the Corners. On only one occasion did we see Baron Von Steuben's Regulations for the Order and Discipline of the Troops of the United States on display in the Corner. As we began our study a red knit cap with the words "Liberty or Death" was included in presentations, but we did not encounter it after our first few weeks of observation.

Visitor Reactions

For most people the Discovery Corner is an involving experience. Unlike a guided tour of a hall in which most of the talking is done by the docent, visitors to the Spirit of 1776 talk and ask questions. Typically, at least half of the people in attendance at a presentation will have asked a question, answered a question or contributed a comment.

Visitors were not likely to be as highly involved in a presentation if the docent did not play an active role in pointing out objects and supplying information about them.

Visitor attention to the information presented is often reflected through spontaneous comments and questions:

- As a docent dressed a volunteer with equipment, one boy called out: "Why is everything on the left side?" He had noticed an emerging pattern in the clothing design.
- A volunteer soldier was finally weighted down with all the gear. An audience member commented: "Wouldn't it be hard to hold the gun and carry the kettle? It's heavy--and there's all this other stuff to carry."
- As a docent demonstrated placing gunpowder in the pan in preparation for firing the musket, a young boy announced: "Oh, you do that so it will fire."
- A docent explaining the multiple uses of musket parts was aided in her conclusion by a child who stated: "You got to use it (the bayonet) to protect yourself."

It was common to hear visitor comments which compared present day customs to those encountered by the eighteenth century soldier. Quite frequently persons remarked on the similarity in preparation of the firecake and a pancake and almost always concluded that the taste of the firecake might not appeal to twentieth century palates!

Visitors approached the objects as items of curiosity. The single most sought after piece of information about an object was its name. Secondly, visitors were curious about how the object would be used.

Comments or discussions about the qualities of an object were infrequent. When they did occur they were usually in direct reaction to the coaching of the docent. Thus, visitors would notice and comment on the weight of the kettle or the similar shape of the shoes only if the docent had mentioned the particular quality first. The typical pattern for interaction with an object was: noticing an unfamiliar object, picking it up, asking what it was and then placing it back on the platform. Visitors did not manipulate the objects. An object was examined in the same position in which it was handed to the person. Rarely did a person explore shape or texture.

We did observe some instances in which visitors used the Corner as a mini-theatre. One child and her mother spent nearly an hour in the Corner as she tried on all of the clothing (several times) and played with all of the equipment. The Corner and its objects (e.g. costume, musket) were also used as props for still photographs.

Finally, visitors sometimes shared personal stories and interests with the docents. These stories ranged from one boy who told what it was like when he ate firecakes with his Boy Scout troop to serious and prolonged discussions about the military strategies employed during the Revolutionary War. These discussions appeared enjoyable to both the visitor and the docent.

Exiting the Corner

Visitors flow in and out of a corner, so that it is possible that only half of an audience present for the beginning of a presentation are also present at its completion. For the most part visitors trickle in and out of the Corner and create no major disruption. However, if a large group which has been attending a presentation leaves a Corner, then the handful of remaining visitors will also leave. It is as if they sense discomfort in being the only ones left.

Although the audience does not often remain constant, docents do generally offer a presentation with a beginning, middle and ending. The means by which docents concluded presentations and the behavior of visitors

immediately following a presentation were the focus of some of our observations. Specifically we looked for:

- the manner in which the docent concluded her/his remarks to the audience
- visitor comments as they left the Corner
- instances of object exploration and manipulation by visitors
- travel patterns of visitors as they left the corner

Docents utilized a variety of techniques for concluding a presentation. Most common in the Spirit of 1776 and Electricity Corners was a brief summary of the presentation or a simple announcement that that was all that the docent had to show. At the Rehabilitation Corner nearly all docents closed with a statement about the theme of the Corner and the title of the hall--"Triumph Over Disability." An explanation of the figures from the Wizard of Oz was provided and in nearly half of the instances the docent referred people to the artificial leg made by a farmer in South Carolina and now on display in the exhibit hall.

From time to time, visitors will applaud at the end of a presentation. This is usually in response to a rather formal lecture-type presentation which has been concluded with a "thank you" to the audience. These visitors appear to be reacting to the Corner as they would other lecture situations, and they leave the Corner immediately after being "dismissed" by the docent. Typically visitors thank a docent for "a good talk," "a nice experience" or because "It was fun."

Children appear particularly intrigued with the Corners but often have to leave before they seem ready. Parents sometimes interrupt a docent to thank her and inform her that they simply must move on. Children frequently request more time, but they are only occasionally successful. Several docents commented on this situation:

- Many times I feel very rushed by the parents. It's a shame because the children are very involved and interested. I try to respond to their interest while keeping the parents quiet. Sometimes that's very difficult.
- This morning I had a young boy in here--around 10 years old. The boy was so curious. He listened carefully and was full of questions. His father kept saying 'we must move on'--but I persisted and kept the boy for a while. Sometimes the parents are a real problem.

As parents leave the Corner with their children they do not stop in the adjacent hall, but instead move quickly to another section of the

museum. This behavior is typical of most visitors to the Corners. In all of our observations we saw no more than three dozen people attend to the exhibit hall related to the Corner following a presentation. The majority of people who did view the hall did so after the presentation in the Rehabilitation Corner. (This may be in response to the docent's suggestion that visitors be sure to see the handmade leg on display.) Also, if the docent ends the presentation with an explicit invitation to explore the objects or ask questions, some visitors will linger. By far, the most common visitor behavior at all the Corners is for visitors to leave immediately after the presentation.

Electricity Corner

Subject Matter Presentation

The content of the presentation focused on explanations of the function of the objects placed on the demonstration table in the Corner. For example, a docent would explain the function of the Leyden Jar or the early telephone, and in doing so, parts of the objects were named. (Team members found it difficult to discern a general theme statement.)

While all docents began with a demonstration of the properties of static electricity, not all docents handled the subject matter in the same manner. Essentially, we observed two types of presentations in the Electricity Corner. The more typical was that of a docent explaining the functions of instruments and demonstrating the properties of static electricity and electromagnetism. The second type of presentation offered much of the information from the first, but couched the information in an historical context. Thus, a docent giving a presentation of the second type would begin with a discussion of Benjamin Franklin as an important historical figure. This was followed by static electricity experiments as examples of the kind of scientific study Franklin pursued.

All docents proceeded through the information in an historically progressive fashion. Static electricity was followed by electromagnetism which then led to introduction of three models of the telephone and finally, the telegraph. Again, while the ordering of information remained consistent across docents, the emphasis -- historical or scientific -- varied.

Mode of Presentation

The presentations in the Electricity Discovery Corner are more formal than in the other Corners. Presentations have a lecture/demonstration format. Much of the material being discussed is abstract, oftentimes resulting in the docent introducing ideas and concepts for which there is no tangible referent. For the most part, presentations are directed to children in the audience.

Generally, there is little interaction between the docent and visitors during or after a presentation. Occasionally, docents will ask questions when children are present, e.g. "Why is the magnet important?"; "Do you have static electricity at home?"; "Can you tell what's missing?"

Use of Objects

Objects in the Electricity Discovery Corner are handled by the docent. A typical presentation includes use of:

- plastic tube and silk cloth (bits of paper)
- foil balls
- point for drawing off electricity
- electromagnet (paper clips)
- battery
- Morse telegraph
- Leyden Jar
- Bell's electromagnetic membrane instrument
- Bell's centennial phone
- candlestick phone

The docents used the foil balls, point, tube and silk to produce static electricity and demonstrate some of its properties. The electromagnet, telegraph and telephone were presented as objects developed as a result of scientific work in the field of electricity.

Docents had active involvement with the objects. From time to time certain docents would invite a child from the audience to use the point to drain electricity from the foil balls or to send a code message on the telegraph. Essentially, sections and parts of objects were demonstrated. On occasion docents supplement lecture material with the use of photographs and illustrations. When the pictures were used they were the only items passed through the audience. Sometimes even the pictures were handled only by the docent.

- At the end of a presentation docents thanked visitors for stopping. Nearly all visitors left the Corner immediately. Only a few very interested younger children approached the demonstration table after the presentation. This usually occurred with a child who had asked a question and was invited to come closer to look.

The partition separating the back of the Corner area from the main Electricity Hall had a shelf. During most of the study a grouping of books about electricity were on this shelf. Rarely did visitors browse through these books, and we never observed a visitor who stopped and read from any of these volumes.

Visitors who spend time at the Corner show clear signs of interest. Even though there was considerable noise and distraction during many of the presentations, we observed visitors move closer to the docent or lean forward in their chairs to overcome these outside annoyances.

Children were often captivated by the science experiments. It was common to overhear children imploring their parents to remain at the Corner for the duration of the presentation. However, even the most involved members of the audience shuffled feet, talked to one another and followed distractions when a docent digressed to a topic only tangentially related to the general presentation subject matter. One instance of this behavior predictably occurred when docents expanded the information about Joseph Henry. While background information about Henry's life in the original castle building was responded to with interest, more specific information about each building on the mall generally produced restlessness. Additionally, highly technical information about the apparatuses produced less visible interest among audience members than did more general, overview information. We observed a few docents who were knowledgeable about the objects and their workings and could convey that information in a concise manner. These docents consistently held the attention of audience members. Visitors responded to docents who were knowledgeable without being highly technical.

INTERVIEW DATA

Reactions to the Discovery Corner Concept

What is a Discovery Corner?

There was an overwhelmingly favorable reaction to the Discovery Corners on the part of visitors. Nearly each person we talked with regardless of age or Corner visited began his or her comments with statements like, "wonderful," "exciting," "interesting," and "fantastic." Children and adults alike give the Corners very high marks.

- I'll bring my kids next time--it's great.
- This is the longest we spent in any one place the whole time we were here. We didn't even think of the time.
- It makes sense to have people talk about what you see.
- I really enjoyed it. He explains things better than a teacher. He had this stuff you could touch and then he would talk about it--and it always led into something else. He was so interesting.
- Great. Fantastic. California needs some.
- You really learn more if there is a story or an experience. You can look all day--but if it all comes closer to home, you remember more if you can come closer to the objects.
- I can't wait to go back to school and tell my class about this--we are studying electricity.
- Good to have audience participation.
- The Corner is better than labels--it's life!
- I'd give it an A++.
- It was good. It's better for the kids than pushing buttons. I've seen them push a button and not even wait to see what happens. Here they really watch.
- No matter how much you think you know--you can always learn more. This was very informative.
- It's better than a teacher 'yakking' at you all day. You get to see experiments and stuff. I

wish I could do some myself.

One of the few visitors who was not excited about the Corners as an experience for himself, did however, see the Corners as offering a good experience for children.

- I see the Corners as especially for children.
I prefer to be alone and spend my time as I please.

The initial reaction of this man--that the Discovery Corners are for children--was shared by several other visitors and by many docents as well. Many parents whom we spoke with had stopped because they felt that being able to touch things would be fun for their children. There was also a generalized feeling among parents that children are better engaged in a live presentation in the museum than they are by walking through the exhibit halls. Having a personal experience seemed to capture the fascination of many visitors. Visitors describing their experiences as "involving" and "lively." In fact, words like "life" and "living" were often used to describe a Discovery Corner. What follows is a sampling of visitor statements about what a Discovery Corner is:

- (It) Approaches serious subjects with humanness and a bit of humor.
- This is like 'living history!'
- I like demonstrations. This reminds me of the lady spinning over in the other hall.
- These mini-talks are a good idea. The people know what they are talking about. They probably know more but they don't bore you with everything.
- It's something personal that you can do. A lot of these buildings are so big it makes you feel lost. When you get a chance to have a personal thing like this you don't feel so lost.

Very few visitors used the term "Discovery Corner." The above comments do reflect, however, visitor awareness of a positive, unique experience. In addition to these general reactions, visitors responded to presentations along four specific dimensions. These dimensions are (1) the opportunity for interaction with a human; (2) the possibility for receiving explanations relevant to individual concerns; (3) the change of pace from usual reading and looking; and (4) the opportunity to touch objects in the museum. Each of these more specific reactions to the Discovery Corner will now be presented.

(1) Interaction with Humans

Visitors perceive a quality in docent interactions which is not

available to them as they tour an exhibit without benefit of a personal guide. The presence of a knowledgeable museum representative adds a pleasant dimension to the entire museum experience for most visitors.

- It is so fine to come across a real person.
- The woman was so gracious and most helpful. She gave us good information.
- It seemed real personal. She was better than any computer that talks to you. I mean she really wanted to know if I had any questions.
- I liked it. I'd rather listen to someone tell me about something than just look at stuff all by myself.
- Great idea . . . it was the music and the invitation of the woman that made us go to the front. The whole set-up is very pleasant looking.
- The Discovery Corner offers a personal experience because of the one-on-one presentation by the docent. This is lacking in average exhibits--this idea should be adopted into regular exhibit designs.
- These people have obviously studied. They give a nice smooth talk.
- I'll bet it isn't easy to do this--especially when people are coming and going. That lady must be used to it though. I don't know how else they could run these things for the crowds they have in here. I'm glad we stopped. I'd probably stop next time if I saw that lady explaining something else.

The personalness of the experience is further represented in the pleasant exchanges between docents and visitors as visitors are preparing to leave the Corner. A young child, obviously excited with the experience took time after his family had begun to move on to look at the docent and say, "Thank you so much. This was very nice." As mentioned earlier, people do thank docents at the end of the presentations and do so in such a manner that it appears to us that they hold the docent directly responsible for the success of the experience.

Visitors report that having a knowledgeable person available affords them the opportunity to learn specific information without having to solely depend on the written label materials.

- Seeing these things in the museum is my only opportunity to learn about something like rehabilitation. I think you learn more listening to someone than by just looking in the cases.

- It was good to have a person explaining things. Signs only identify something. Seeing how it works is important. Most kids don't know how things work.
- It was very personal. She heard us talking about the picture of the Guilford Courthouse and later asked if we were from North Carolina. It was a nice touch.
- The woman is definitely better than labels.
- With someone live it's so much more effective. We just glance at these cases because they're just not as interesting.
- I've probably learned more here than I'll learn all day. I think I'll probably remember this too. The other stuff? Well, who knows?
- Are there more of these talks? I don't like long, drawn-out tours but this is just right. The person seems like an expert--enough for my taste, that is.

(2) Possibility for Relevant Explanations

Visitors responded to the opportunity to seek additional information from the docent. Many were able to pursue topics of personal interest through a question to the docent or in casual conversation after the presentation. The flexibility displayed by docents in presentational mode, subject-matter and ability to respond to a wide variety of questions served to make the experience relevant to visitors.

- The analogies the woman used were ones that any child could understand. It was really great.
- The man was really good. - He seemed able to sense things. He didn't approach the kids too quickly, he could speak their language, and ours too. He seems very approachable so that kids can ask him questions--he doesn't use big words.
- What I like about it is that you have a chance to ask questions.
- The talk is much better than looking at cases because you can learn how to use the things you see.
- The lady made it relevant for children. She was so good with her questions, and the way she explained things. I've never heard this sort of science stuff sound so simple before.
- What amazed me is that the kids actually asked

questions. These are the kind of kids that it's impossible to interest.

- I had a question about guns but my husband couldn't answer it, and there was no way for me to get an answer because there was no one else to ask. Here you can ask your questions and get answers.
- We didn't get a canned presentation.
- Having a person to ask questions was really good. When you walk in the museum, sometimes you have questions 'cause you really don't know much about the stuff--but there is no one to ask.
- The woman can talk and answer the questions that we have--an exhibit can't.

(3) Change of Pace

As reported earlier, most people encounter a Discovery Corner quite by accident. For those who stay for a presentation the experience is a happy accident. The opportunity to talk with someone and see objects up close is a change of pace from the more common museum visitor behaviors of walking through exhibit areas seeing objects and reading labels. Some visitors report a certain degree of monotony in performing these same behaviors throughout a visit. The Discovery Corner offers them a means for interacting with the offerings of the museum in a new, refreshing, and for many, more involving manner than is typical of their usual behavior.

- We came down to see the exhibit on medicine. I was very surprised to find this down here.
- Visitor involvement encouraged by the docent is a great help in understanding and should be applied to other exhibits.
- It breaks the monotony of pace--which is good.
- I'd rather hear about it than read it.
- It was more interesting than just looking at cases of stuff. That's pretty dead, and you get tired of reading labels.
- Oh, this is good--you can really see up close.
- I never saw a presentation anything like this in a museum before. It's a good idea.
- This is an ideal set-up if you have the time. If not, you can just stop for a few minutes and scan what's going on.

- It makes the subject come to life. It is a very good concept.
- Watching this was a good break. I'm ready for more now (referring to exhibit halls).
- It wouldn't be good to have these all over the place but here and there it gives you something different to do that you don't have to pay for.
- How many times do you ever come across someone who can explain something? Now much anymore. Everyone has quick answers or no answers. This is different because the people seem very knowledgeable. Of course--you'd expect that in the Smithsonian!

(4) Touchability

The opportunity to touch objects was a highlight of the Discovery Corner experience. Visitors felt that being able to touch objects offered them an opportunity for greater involvement.

Both adults and children took advantage of being able to touch, although some people commented that there was special value in touching for the children.

- It's great for the kids to touch things.
- I think my kids would enjoy touching things--something they don't often get the chance to do in a museum.
- I wish I could have some objects like these to use in my own teaching. It makes such a difference to be able to actually show the kids what you're talking about.
- I liked the Corner and the concept of being able to touch things and to discuss things.
- It's good to be able to see things. The shoes were the best.
- Seeing and touching these objects makes all of the difference.--You understand more, 'cause there's more to understand.
- When stuff is behind a case you can't see how it functions. Here you can see how it works.
- It works! You can handle the objects, touch them and feel them. You're not just looking in, but you can be part of it too.

Involvement with the museum objects provided through being able to touch the objects and examine them closely was enjoyable in and of itself. But even more importantly, the majority felt that this more direct experience with the items and their functioning made it easier for them to learn.

The hands-on experience increases understanding.
People learn more by doing than by reading.

You can touch things, and you can ask questions too. That's when you learn.

Reactions to Information

Affective Impact

All three Discovery Corners are experienced as enjoyable places to be. When asked about what they felt about the presentation they had just witnessed, people did not hesitate to use superlatives:

It's great.

It's neat.

This is wonderful.

Fantastic!

I was fascinated.

This is very worthwhile.

I can feel kids learning more in the Corner. It's easy to lose them in the hall--there are so many distractions.

I'm glad we stopped there.

I was never much on American History. This was so much less structured than a class. I guess it was more fun to learn.

The immediacy of the experience resulted in a sense of identification with the people, problems and phenomena discussed. This was true in each of the Corners. In the Spirit of 1776 visitors commented on their recognition of the soldier's hard life; in the Rehabilitation Corner visitors reported being much more aware of the adjustments handicapped persons undergo; and in the Electricity Corner, demonstrations allowed for learning about common phenomena which many visitors admitted they "never really understood exactly how it worked." As one man happily expressed it, "I learned more in this half hour than I did in all of high school physics!"

The Rehabilitation Corner provided a particularly unique experience

for many of its visitors:

- I liked the stress on the people. The woman kept pointing out that none of the equipment would mean anything if the person wasn't motivated to learn how to use them.
- I really appreciate what the Lord has given me. I was reluctant to see this, but I felt so strongly about it. It's a shock to realize someone has lost a leg or a hand. I got a little sick just looking at that fake hand. Believe me, I got a lot of problems, but truthfully I'm happy when I think that I'm healthy.
- You would never know about these things unless you knew someone who was disabled.
- Perhaps the handicapped people are better at accepting than normal people.
- I get the feeling that if something were to happen to me there would still be hope.
- I already had some interest in this--there are two men who go to my Church who have false arms. At least now I know what it looks like under their sleeves.

In addition to personal insights, visitors to the Rehabilitation Corner consistently spoke of their experience as leaving them with a greater awareness of the plight and courage of the handicapped.

Furthermore, they commented that this awareness was made possible through the unique nature of the presentation. There was a consensus among visitors that the understanding they attained was made possible through the words and actions of the docent and the opportunity to get so close to prosthetic devices.

- The thing that's special about this is that it's good to see these kinds of things. You're always curious when you see someone with something wrong --missing an arm or leg or something. If you've seen one of these then there's less need to ask out in the open and maybe embarrass someone.
- This made me feel more comfortable about the whole subject matter. I even imagine that I would now feel comfortable enough to talk about these topics with a handicapped person.
- The usual feeling is that you better not talk about a handicap. You just pretend it doesn't exist. Here you talk about things--and that's much better.

- When you see someone, it's unusual, but you don't really want to stare even though you're curious. It's good to be able to look here. You don't embarrass anyone, and you learn too.
- I think this is a wonderful experience for my daughter. I want her to see how handicapped people adjust. This whole experience has value. I became more aware of accepting the handicapped.
- This is great--it takes us out of the closet. (handicapped respondent)
- If you have an opportunity like this to look at how these things work, then the less you stare when you see a person with an artificial arm or leg.
- I love seeing something like this at the Smithsonian. People just aren't educated about the handicapped. This is a help.
- This is a start, but we need a better effort in public education. The handicapped are a part of us.

Cognitive Impact

Nearly all visitors express the feeling that they have learned something in a Discovery Corner but they are unable to pinpoint specific learnings. Rather, they report a general feeling of knowing more about rehabilitation, the Revolutionary War or electricity. For instance, one boy was unable to remember anything specifically which he had learned, but he was confident that "this will be a great help on the next social studies test!"

Those visitors who did comment on learning in the corners remarked that their learning was facilitated by the type of information presented:

- The presentation appealed to all levels. The woman gave a very concise and very clear explanation without being misleading. She didn't get bogged down in a lot of terminology. She demonstrated and she spoke. She covered a lot of information and didn't go on and on.
- What I liked was the way that the talk was not too in depth for laymen to understand. But it still scanned over quite a bit. You could learn about all of those things in not too much time.

There were portions of the presentations in each Corner which were most prominent in visitors' minds as they discussed what they had learned. In fact, the most common response to the question about what had been learned in the Discovery Corner was to list several of the objects demonstrated during the presentation. Certain objects were predictably mentioned for each Corner:

The Spirit of 1776 The musket was most remembered and most talked about by both male and female visitors. The second most talked about object was the cooking kettle. The weight of the kettle was the piece of information which most visitors used to illustrate their awareness that the life of the soldier was hard.

No visitors commented on the smaller objects which were used in nearly every presentation. Thus, playing cards, dice, food items and canteens did not appear to make a significant impression. It should be noted that although visitors did talk about objects they had seen, they seldom used the correct name for the object. The musket was called a gun; the musket ball was called a bullet, etc.

Rehabilitation Visitors who had heard a presentation about the blind, the deaf and the physically handicapped, continually commented solely on prosthetic devices. The hydraulic leg was the one object mentioned by nearly every visitor we interviewed. Not all people could explain how the device operated, but all were impressed that they had seen the object up close. Even when asked to consider other things they had noticed during the presentation, only a handful of people commented on anything related to the blind or the deaf.

After the artificial leg, the next most talked about items were the mock arm and the cosmetic hand. No visitors used the term "prosthetic" in our discussions about the Corner.

Electricity The objects of most interest to visitors here were the foil balls used to demonstrate positive and negative charges, the rod and silk used to demonstrate static electricity and the early model of the telephone. The first two items appeared to hold interest for their ability to clearly demonstrate complex concepts while the telephone served as a curiosity-- "how could that have led to the telephone as we see it today?"

In addition to expressing interest in and remembering specific objects in the Corners, some visitors learned more about the functioning of the objects. In fact, this expressed ability to learn more about "the way things work" was mentioned as one of the unique advantages of the Discovery Corners. General consensus was that label material was most effective for identifying an object and placing it in history. The presentation with objects by the docent provided information about the working of these objects.

- I tried on that arm. At first I wasn't aware of the muscle control--but I started to get the hand of it.
- I learned how a hand works.
- I saw an artificial arm before, but I never knew how it worked before.
- After being here and listening I feel like I know what's happening when a person uses a limb--it really doesn't have to be an embarrassment to a person.
- This little girl that we know has a false eye. She has to get it replaced all of the time. I never knew why--and it's not something you ask about. Now I realize that she has it replaced because of growth. They have to be sure that the eye fits perfectly.
- I think I understand how the arm works now. One of my friends at school has a missing arm. I've seen her arm, but I never knew how it worked. She really has to use her muscles.
- I learned how the gun works. I never knew how it worked before.
- My uncle has one of those guns. So I saw one lots of times--now I can tell him how it works.
- I didn't realize the bullet came out like it did. It was so inaccurate. They had to fire in mass to hit anything. They just shot and hoped for the best.
- Now I know how a telephone works--it has an electro magnet.
- I began to understand how a battery works.

Persons also reported learning about the lifestyles and everyday concerns associated with the citizen soldier and the handicapped person.

- I learned what they (the soldiers) went through--it was hard.
- We should be really proud of those soldiers. They were brave.
- We're reading a book in American History called, Banners at Shennandoah. Now I know how the hero felt carrying all that stuff around all the time.

- That was neat. I learned about the life of the soldier.
- I was especially pleased to have learned about the 'invisible' handicaps of the deaf and dumb people.
- After seeing something like this when the kids see a person with an artificial arm they can say, 'Hey, I know about that . . .' They are made more aware of the needs of the handicapped people.
- I learned that it would be hard to learn how to use arms in the beginning (of rehabilitation).

Learning in the Discovery Corner was enjoyable and part of what made it so was the type of information being presented for the visitor to learn. Each corner had its share of tidbits which left the visitors saying, "Well, I'll be darned!" It was these tidbits of information which remained with many:

- That guidebook is amazing--braille is wonderful, but it's also cumbersome.
- Braille was only 15 years old.
- You know, the way they bite off the gunpowder-- you would get gunpowder in your teeth. You might have to drink water so you wouldn't explode.
- I never knew that the Secretary of the Smithsonian was a scientist.
- I never knew why they called those things tinder boxes--now I do, and you know, it makes sense.
- Those shoes--I never knew about there being no left or right sides.
- I was surprised to hear of the famous people with false eyes.
- An ohm is named for a person . . .
- I thought it was neat the way they put everything on the left side. Otherwise they might try to load the gun with pork salt.
- The 'X' on the front of the soldier is not just for decoration--I always thought it was decoration, but it's there because of the way they carry their equipment.
- I think it is so interesting that Alexander Graham Bell had family members with hearing problems.

- When they showed the gunpowder and the spark in the gun. It could have made a hole in the wall. I never saw that before.
- Can you imagine having to walk around with that (kettle) all day, and then having to cook with it? Oh my!

In summary, people do learn while in the Discovery Corners. They do not report learning major concepts--such as definitions of rehabilitation or the principles of electromagnetism--but they do report identifying objects they have never seen before. Most unique to the Discovery Corners, people report learning about the operation of objects. This functional learning provides them with a feeling that what they have learned is meaningful.

VISITOR SUGGESTIONS

There was unanimous agreement among visitors that the Discovery Corners were a good experience. Although we asked, we got no suggestions from visitors about the operation of the Corners. The enthusiasm created by the Corners did prompt many people to suggest adding Corners throughout the museums and advertising all Corners. Visitors enjoyed their experiences in the Corner and wanted to be more aware of the availability of such programs.

If it is financially feasible then there should be more corners. They should have knowledgeable people who are enthusiastic--especially enthusiastic.

It's easy to miss this place. I think that there should be more publicity. I saw the sign by the desk near the mall, but that sign is small and easy to miss.

Several kids walked right through this area. It's a shame because you can really learn something important here. There should be some visual to attract attention.

The Corners are not advertised enough.

There were some comments that the name "Discovery Corner" was not descriptive. While an occasional visitor was drawn to the Corner because of the title, the majority reported not knowing what the title meant. Some suggested offering a description of the Corners at the information desks while others suggested titles like:

Journey Through Time

Information Center

Living Exhibit

One visitor expressed the concern of many with not knowing when a presentation was beginning or when it was appropriate to enter a Corner.

Need more of a time structure. It's too unstructured as it is and the woman must repeat herself because she doesn't know who has heard what.

Rather than stimulating suggestions about the Corners in particular, the Discovery Corners stimulated visitors' thinking about the museum experience in general and how it might be improved through the incorporation

of Discovery Corner features.

There should be more, easily identifiable people in the museum who can answer questions.

The museum should have more resting places. This is great for that.

I'd like to see more people in the museum that you can talk with.

This relates the museum to me. I can understand it. I think I'd understand more if there were more areas like this.

DATA SUMMARY

To: Department Staff

From: Dr. R.L. Wolf
Dr. B.L. Tymitz

Subject: Visitor Impact Study

Below is a listing of primary study findings. (Statements from the sections entitled Introduction, Methodology and Areas for Consideration are not included.) Each finding is more fully explained in the body of the report. Other specific details are described in the report that have not been outlined below. The reader is advised to read both the summary and the report.

AUDIENCE DESCRIPTION

1. Family groups and adults predominate. Families and single adults are most likely to remain for more of the presentation than any other visitor category.

AUDIENCE PATTERN

2. Most are spontaneous participants. Only one visitor stated that he had seen the titles of the Discovery Corner on the Information Board located at the second floor entrance.
3. Visitors do not read the signs hanging overhead which label the areas Discovery Corners. Most people become members of a Discovery Corner audience not by looking for it or reading about it, but rather by seeing one in action.
4. Seated visitors tend to view a presentation for a longer period than those who stand on the periphery.
5. The two critical factors which influence audience attendance in a Corner are the location of the Corner within a hall and general attendance in the hall adjacent to the Discovery Corner.
6. Most common are visits from two to five minutes or visits lasting from twenty to twenty-five minutes.
7. There are more visitors to the Corners during the weekend, just as there are more visitors to the entire museum during the weekends. Our analysis indicated no significant difference in visitor behaviors or reactions based on time of day or day of the week of the visitation.

DEVELOPING INTEREST IN THE CORNER

8. The feature which most consistently drew persons to the Corners was the prominent display or demonstration of an engaging object.

9. Direct efforts by a docent to entice visitor participation was the second most common way for a visitor to become interested in a Corner.
10. Expression of an emphatic understanding of the visitor's need for a place to sit and relax was an effective approach for gathering an audience especially after the noon hour.
11. Rarely did a person touch an object without first being encouraged to do so by the docent. For the most part, adults did not touch the objects. Typically a person would approach the Corner, look at objects, point to objects and perhaps talk to the docent.
12. Rarely did visitors request a presentation.

SPECIFIC OBSERVATIONS IN REHABILITATION CORNER

13. Many docents use the term prosthesis without defining it. Our discussions with visitors indicate that they do not come to the Corner knowing what "prosthetic" means, and in fact, visitors leave the Corner referring to the limbs as artificial arms and legs.
14. Nearly all docents proceed from a show-and-tell format. Rarely is a docent talking when she does not have an object in her hand. Docents in this Corner attempt audience participation primarily through use of volunteers. Children were far more likely to volunteer operating the mock arm than were adults. Most docents make the offer of trying to children. There is a general sense that children are more receptive to the experience than are adults.
15. Most docents speak in a manner understandable to children, when children are in the audience, although words like "ostracized," "congenital," "membrane instrument," "capacitor," "armories," and "mercenary" were used in presentations to children no older than eight.
16. Although initially attracted by curiosity, visitors display behaviors which indicate some discomfort with the objects. The encouragement of the docent usually results in more people in an audience attempting to explore objects available for inspection. On the other hand, if a docent mentioned little about the qualities of an object, it was passed rather swiftly from one person to another.
17. Except for the braille and sign language cards there was a great deal more visitor interest in the objects related to the physically handicapped than there was for the material on the blind and the deaf. It is the artificial arms and legs which engage the visitors most intensely.
18. Children were a bit more exploratory with the objects following the encouragement of their parents. It is nearly always a child who tries to operate the mock arm. The arm is actually fitted for an adult, but only after much cajoling from a docent or companion will an adult experiment with the arm.
19. The Corner seems to stimulate an interest in learning more. Several people asked how they could learn sign language. We have even seen people throughout the museum practicing the manual alphabet with the

assistance of the cards passed out at the Corner.

20. Questions abound in this Corner. Most often the questions asked in the Corner relate to the use of the objects by the handicapped. The questions asked by visitors reflect a developing awareness of the concerns of the handicapped.

SPECIFIC OBSERVATIONS IN THE ELECTRICITY CORNER

21. The more typical was that of a docent explaining the functions of instruments and demonstrating the properties of static electricity and electromagnetism. The second type of presentation offered much of the information from the first, but couched the information in an historical context.
22. The presentations in the Electricity Discovery Corner are more formal than in the other Corners. Presentations have a lecture/demonstration format. For the most part, presentations are directed to children in the audience with little interaction between the docent and visitors during or after a presentation.
23. After the presentation, nearly all visitors left the Corner immediately.
24. Visitors who spend time at the Corner show clear signs of interest even though there was considerable noise and distraction during many of the presentations.
25. Members of the audience shuffled feet, talked to one another and followed distractions when a docent digressed to a topic only tangentially related to the general presentation subject matter.
26. Highly technical information about the apparatuses produced less visible interest among audience members than did more general, overview information.

SPECIFIC OBSERVATIONS IN THE SPIRIT OF 1776 CORNER

27. Two general themes emerged in the presentations at the 1776 Discovery Corner. Some docents emphasized the life and times of the citizen soldier while others focused solely on the individual objects.
28. Docents in the 1776 Corner used the inquiry method of presentational style. They consistently tried to encourage participation from audience members by asking these visitors to supply answers to a series of questions. The most successful approach is that of posing questions and then allowing a variety of responses. This is followed by a discussion of the rationale for certain guesses leading to a logical conclusion for the "correct" response. These procedures stimulate continued participation from the audience. Both children and adults are addressed by the docents.

22. Visitors rarely supply the correct answers to docent questions. During the entire questioning process the objects remain with the docent. If the audience does not identify the object on a few trial guesses, then the docent supplies the information and passes the objects through the audience.
30. At least half of the people in attendance at a presentation asked a question, answered a question or contributed a comment.
31. The single most sought after piece of information about an object was its name. Secondly, visitors were curious about how the object would be used.
32. Visitors did not manipulate the objects. An object was examined in the same position in which it was handed to the person. Rarely did a person explore shape or texture.

EXITING THE CORNERS

33. For the most part visitors trickle in and out of the Corner and create no major disruption. However, if a large group which has been attending a presentation leaves a Corner, then the handful of remaining visitors will also leave. It is as if they sense discomfort in being the only ones left.
34. Children appear particularly intrigued with the Corners but often have to leave before they seem ready. Children frequently request more time, but they are only occasionally successful persuading their parents to remain.
35. As parents leave the Corner with their children they do not stop in the adjacent hall, but instead move quickly to another section of the museum. In all of our observations we saw no more than three dozen people attend to the exhibit hall related to the Corner following a presentation. The majority of people who did view the hall did so after the presentation in the Rehabilitation Corner. If the docent ends the presentation with an explicit invitation to explore the objects or ask questions, some visitors will linger.

REACTIONS TO THE DISCOVERY CORNER CONCEPT

36. There was an overwhelmingly favorable reaction to the Discovery Corners on the part of visitors. Children and adults alike give the Corners very high marks.
37. The belief that Discovery Corners are for children was shared by several visitors and by many docents. Many parents whom we spoke with had stopped because they felt that being able to touch things would be fun for their children. There was also a generalized feeling among parents that children are better engaged in a live presentation in a museum than they are by walking through the exhibit halls.
38. Words like "life" and "living" were often used to describe a Discovery Corner. Very few visitors used the term "Discovery Corner."

39. Visitors perceive a quality in docent interactions which is not available to them as they tour an exhibit without benefit of a personal guide. The presence of a knowledgeable museum representative adds a pleasant dimension to the entire museum experience for most visitors.
40. People do thank docents at the end of the presentations and do so in such a manner that it appears to us that they hold the docent directly responsible for the success of the experience.
41. Visitors report that having a knowledgeable person available affords them the opportunity to learn specific information without having to solely depend on the written label materials.
42. Visitors responded to the opportunity to seek additional information from the docent. Many were able to pursue topics of personal interest through a question to the docent or in casual conversation after the presentation.
43. Visitors remark that the opportunity to talk with someone and see objects up close is a welcome change of pace from extended walking and reading labels.
44. The opportunity to touch objects was a highlight of the Discovery Corner experience. Visitors felt that being able to touch objects offered them an opportunity for greater involvement. People commented that there was special value in touching for the children.
45. The immediacy of the experience resulted in a sense of identification with the people, problems and phenomena discussed. This was true in each of the Corners. In the Spirit of 1776 visitors commented on their recognition of the soldier's hard life; in the Rehabilitation Corner visitors reported being much more aware of the adjustments handicapped persons undergo; and in the Electricity Corner, demonstrations allowed for learning about common phenomena which many visitors admitted they "never really understood exactly how it worked."
46. Nearly all visitors express the feeling that they have learned something in a Discovery Corner but they are unable to pinpoint specific learnings. Rather, they report a general feeling of knowing more about rehabilitation, the Revolutionary War or electricity.
47. The most common response to the question about what had been learned in the Discovery Corner was to list several of the objects demonstrated during the presentation.
48. Some visitors learned more about the functioning of the objects. In fact, this expressed ability to learn more about "the way things work" was mentioned as one of the unique advantages of the Discovery Corners. General consensus was that label material was most effective for identifying an object and placing it in history. The presentation with objects by the docent provided information about the working of these objects.
49. The enthusiasm created by the Corners did prompt many people to suggest adding Corners throughout the museum and advertising all Corners. Visitors

50. enjoyed their experiences in the Corner and wanted to be more aware of the availability of such programs.
51. There were some comments that the name "Discovery Corner" was not descriptive. While an occasional visitor was drawn to the Corner because of the title, the majority reported not knowing what the title meant.
52. Visitors expressed the concern of many with not knowing when a presentation was beginning or when it was appropriate to enter a Corner.
53. Rather than stimulating suggestions about the Corners in particular, the Discovery Corners stimulated visitors thinking about the museum experience in general and how it might be improved through the incorporation of Discovery Corner features.

AREAS FOR CONSIDERATION

The previous sections of this report have presented observational data on visitors as well as detailing data elicited during interviews. This segment of the report considers both forms of data as they interact. The intent of the following discussion is to outline what we believe to be salient issues for the consideration of Department personnel regarding the Discovery Corner concept.

ISSUE ONE: What should a Discovery Corner be called?

Our data indicate that only a handful of visitors arrived at the Discovery Corners intentionally. While the posters advertising Spirit of 1776 are responsible for attracting an occasional visitor to that Corner, most persons happened to be passing by at the time of a presentation and were drawn by the small crowd. The few visitors who saw the Information Board listing the Corners admitted they "had no idea what a Discovery Corner was." The current title does not describe the experience to a degree that a potential visitor can surmise what is offered at the Corner. Even those at the presentation fail to view the experience as one of discovery per se. Also, adult visitors remarked that the title connotes a child-oriented experience adding that they were sometimes uncomfortable "with taking too much of the lady's (the docent) time." The issue for consideration, then is whether another title would be more descriptive of the experience. A more descriptive title might serve a number of purposes: (a) to attract more visitors to the Corner; (b) to help visitors relate to the experience more effectively; (c) to broaden the implied audience level; (d) to create a set of expectations for the experience.

If a new title is instituted or if the current title remains, the location of information about the Corners should be considered. The majority of visitors do not attend to the sign at the Information Desk which lists the three Corners. The posters for Spirit of 1776 have been placed at reasonably popular locations but neither the Information Board or the posters provide the visitor with an idea of what a Discovery Corner is or what happens at such an area. Such information could be succinctly integrated into a program announcement.

ISSUE TWO: Location

There is little question that the attendance at Spirit of 1776 is affected by its rather remote location. During the period of our observations, we found it to be the least-attended Corner. Proportionately, for the number of hours the Corner is staffed, the crowds are one-third smaller in this area when compared to the Rehabilitation and Electricity Corners. Curiously, it is the Spirit of 1776 Corner which is best equipped for a presentation--seating is comfortable; the physical design is conducive to direct audience attention to a single speaker; the surrounding acoustics and visitor traffic do not compete with the presentation, etc.

Given that it is the only Corner that is advertised via posters and given optimal conditions for presentation as well as expressed visitor interest in the topic, we can only conclude that the location is a constraint to this Discovery Corner.

There were some constraints upon the Electricity Corner but these were of a somewhat different nature. Essentially, the presentation by the docents was sometimes inaudible due to the continual noise in the surrounding exhibit hall. Docents had few opportunities to compensate for the noise by emphasizing object exploration since this technique was not employed in the Discovery Corner. Ironically, the exhibit dedicated to person-to-person communication was the one most troubled by inability of visitors to hear or at least not be distracted by considerable ambient noise.

Traffic in and about the Rehabilitation Corner was not distracting to the audience. Visitors were aware of movement but clearly chose to attend to the docent.

For all three Corners, the degree of visitor traffic in the surrounding exhibit influenced attendance. The more an area is trafficked, the larger the audience that was attracted. Not only were audiences larger but the docent was able to gather a group more readily. For example, in the Spirit of 1776, a docent might provide only one presentation per hour, while the docents in Rehabilitation gave at least two presentations per hour.

It is important to recognize at this point that docents prefer to present to a group. Some docents are quite skillful at gathering a group but for others, lack of visitor attendance is a discouraging experience.

ISSUE THREE: Presentation Time

The current hours of presentation (11 - 2) span the entire luncheon period. The hour from 12 noon to 1:00 was somewhat problematic. Families are seeking a luncheon area or are at a natural breaking period wherein extended stops at an exhibit area are not readily entertained. Indeed, groups were significantly smaller and presentations less frequent during this time. Given visitor traffic patterns, we suggest a consideration of altering program times allowing for a pause from noon to 1:00 p.m., adding an hour from 2 - 3:00 p.m. This timing would be more congruent with crowd patterns and fatigue factors.

ISSUE FOUR: Program Scheduling

The Discovery Corners were not in operation during June, July and August although they have been in operation during past summers. Because family groups are frequent visitors to the Corners and recognizing that family groups abound in NMHT during the summer, it is our feeling that the

Discovery Corner presentations should be continued throughout the summer season.

Beyond the recognition that summer crowds composed largely of families are a seemingly ready audience simply because they are in the museum, a tangential factor might be considered. Several visitors commented with pleasure on the fact that the presentations were offered at no cost. We sense that this is an unspoken remark by many others. The availability of the presentations at no cost is most attractive to families and, in this regard, supports the position that offering the Corners during the summer would be a welcome event.

ISSUE FIVE: Presentation Level

Audiences at the Discovery Corners are predominated by adults. Two considerations arise from this observation. First, adults tend to view the experience as child-oriented. Parents urge children to touch, question, volunteer. In fact, docents rarely direct their appeals for participant-volunteers to adults. On the other hand, the majority of presentations are at a conceptual level beyond the children we saw in attendance. Thus, the children are the active participants but it is the adults who are more likely to attend to or grasp the overall theme. This was particularly true in the Rehabilitation and Spirit of 1776 Corners. Few persons, adult or child, were able to grasp the theme of the Electricity Corner. (Note: There are fewer children at the Electricity Corner than at the others.)

The situation can be summarized as an incongruity between participation focus and content focus. While we recognize the difficulty of giving a presentation that appeals to all ages, some strategies for minimizing the incongruity might be considered. For example: 1) effective strategies for inducing adults to volunteer might be discussed; 2) docents might become more aware of nonverbal cues they are giving which suggest that the docent prefers a child volunteer; 3) guidelines for adjusting the content level based on audience interest/participation might be outlined.

One word of caution is warranted on this issue. We are not suggesting that the presentations become more adult-oriented or more child-oriented. Rather, that the opportunity for participation be maximized for all visitors. And second, that the content focus, including vocabulary level, be somewhat adjusted to insure a greater probability that the educational objectives of the Corner can be realized by both adults and children.

ISSUE SIX: Educational Training

Our examination of docent training materials and our observations of docents in the Corners leads us to conclude that the docents, for the most part, are quite conscientious in carrying out the wishes of the

Division of Public Information and Education as well as the wishes of the curators. The docents strike us as an able group of people who are eager to learn. They are supplied with adequate information regarding the content of the Corners--and seem to have studied it well. Most docents are quite articulate and relate well on a personal level with the wide variety of visitors they encounter.

From our perspective then, the docents are a group of persons who have natural abilities and subject matter expertise. At the same time, we believe their performance might be enhanced through the knowledge and use of certain educational techniques. In particular, training might be extended to include the following:

- 1) ability to adjust vocabulary that is beyond the audience.
- 2) ability to phrase and rephrase questions in a fluent, flexible manner
- 3) ability to pace the presentation according to audience interest and level of response.
- 4) ability to cue on visitor behavior signals which indicate interest, understanding, discomfort, etc.
- 5) ability to modify presentation according to audience characteristics
- 6) ability to respond succinctly to visitor questions
- 7) ability to extend exploratory behavior
- 8) ability to aid learner's integration of concepts
- 9) ability to make smooth, logical transitions within the presentation
- 10) ability to self-monitor:
 - (a) listening for monotonous, authoritative or condescending tones
 - (b) listening for logical development of a concept
 - (c) listening for distracting repetitions such as "O.K.," "so," etc.
 - (d) awareness of eye-contact during presentation and during visitors' questions

Finally, it might be worthwhile for Department staff to review with the docents fundamental cognitive processes as presently understood by established educationists. Such a review would help to balance some outdated (and counterproductive) notions that a small number of docents seemingly maintain.

ISSUE SEVEN: Stimulating Object Exploration

The opportunity to manipulate unique objects at close range is a novel experience for most visitors. In fact, persons are somewhat hesitant to actually manipulate a particular item. The tendency is for people to look at the object and then pass it to a fellow visitor. Visitors view the objects much as they would those in a display case even though there are no barriers between visitor and the object. We strongly believe that visitors want to explore the objects and move its parts. Interview data reveal that being able to interact with objects is a highlight of the Corners for most people. There is no doubt that visitor interest is clearly stimulated by the objects. We feel however, that visitors may have some difficulty making the transition from a "don't touch" mentality

that they carry throughout the museum to an "it's O.K. to touch" feeling in the Corners. This analysis is somewhat supported by our consistent observations that visitors are more likely to explore a present-day object (e.g. false eye) than an historical item (e.g. soldiers' shoes). It may well be that visitors sense the rarity and fragility of certain objects, being careful not to damage them in any way.

While we observed instances of docents encouraging participants to "take a look at it (the object) as it comes by," it is possible that visitors will study the objects more carefully if the docent gives more specific suggestions for exploration. For example, as an object is offered, a docent might say:

"See if you can find the _____."
 "Which part is hardest to move?"
 "Which part of this do we see in our _____ today?"
 "Close your eyes and imagine how . . ."

These kinds of statements can aid the docents who choose to have the audience explore the objects during the presentation as well as those docents who prefer to save object exploration until the end of the session. (Note: We recommend however that the latter strategy be modified to enhance visitor interest. Docents who prefer the "wait and see" approach can be encouraged to allow an occasional item to be offered to the audience.)

ISSUE EIGHT: Stimulating Exhibit Exploration

One aim of the museum is to offer a type of learning different from traditional modes of reading and listening. The presentations in the Discovery Corners allow visitors to approach objects in the museum in a new way. Moreover, the presentations in the Discovery Corners have unique potential for stimulating visitor interest in the surrounding exhibit. Yet, we observed this occurring only in the Rehabilitation Corner with those select docents who directed visitors to the artificial leg constructed by the South Carolina farmer. Visitors could be drawn to explore exhibit areas if the presentations integrated the objects with the content of the surrounding hall. We noted the need for this particularly in the Electricity Corner. Similar to the suggestions for stimulating exploration, docents might entice persons to peruse the exhibit through the following:

- 1) direct visitors to selected artifacts
- 2) pose an exploratory question
- 3) summarize scope or theme of surrounding hall
- 4) encourage visitors to seek the solution to a challenging question answerable through exhibit information

Efforts to stimulate interest in the surrounding exhibits should be direct while still allowing the visitor to comfortably choose whether or not to tour the exhibit.

ISSUE NINE: Systematic Data Collection

The modifications that occur in presentations are often the result of docent analysis that a particular thing "works" or "doesn't work." It is also clear that docents share strategies for attracting visitors, maintaining audience interest, etc. To insure that such strategies are logical, based on accurate inferences and complimentary to the intent of the Discovery Corners, docents might be encouraged to systematically record information immediately after a presentation. A simplified checklist covering the following areas could ease the task:

- 1) Time of presentation
- 2) Approximate size of audience
- 3) Length of presentation
- 4) Sequence of presentation
- 5) Proportion of adults, children
- 6) Objects displayed
- 7) Objects visitors seemingly most interested in
- 8) Topic areas where audience interest wanes
- 9) Type of volunteers participating
- 10) Questions asked by visitors
- 11) Number of persons remaining after presentation
- 12) Number of persons touring the exhibit

Discussion among Department staff and docents can help to determine other possible categories as well as the desired frequency of collecting data. Analysis of checklists completed over time can lead to systematic decision-making that concerns a single Corner or the Corners as a group.

CONCLUSION

There is no question in our minds that visitors find the Discovery Corners to be a valuable experience. The demonstrations and use of objects stimulate interest and generate enthusiasm. In this regard, it is our feeling that today's audiences have become somewhat more demanding. Adults and children are becoming more accustomed to participatory learning experiences, and the Discovery Corners address this audience preference.

The hundreds of comments that we recorded in this study strongly underscore the desire of the visitor to learn. Some express this desire overtly while others respond on more subtle levels. All, however, convey a sense of pleasure realizing that personal learning has occurred. Museum experiences which maximize learning add a positive dimension to each person's visit. The Discovery Corners are successful in providing these experiences in an enjoyable and effective way.

APPENDIX

OBSERVATION GUIDE FOR DISCOVERY CORNER STUDY

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VISITOR/DOCENT INTERACTION BEHAVIORS

The observations of visitor/docent interactions should allow us to focus on two areas: (1) things docents do and the way they are responded to by the visitors; and (2) things visitors do and how they are responded to by the docents. The interaction between the docent and the visitor is our unit of observation. Thus, for each behavior by a docent noted be sure to watch for and record the reaction (in behavioral terms) of the visitor. The same pattern should be followed in recording behaviors initiated by the visitors. Note the behavior of the visitor and the responding behavior of the docent.

We will examine visitor/docent interaction for the three phases of a visitor's experience in a Corner: (1) Developing interest in the Corner: (2) The presentation itself; and (3) Exiting the Corner.

DEVELOPING INTEREST IN THE CORNER

- I. Behaviors INITIATED BY THE DOCENT, and responded to by the visitor
 - docent manipulation of objects; reactions of visitors
 - docent manipulation of environment; reactions of visitors
 - docent initiation of conversations; reaction of visitors

Some Specifics: How does the docent act in her/his Corner between presentations?
Does the docent pick up objects? Examine them?
Does the docent move furniture?
What kinds of comments does the docent make to passersby?
ETC.

- II. Behaviors INITIATED BY THE VISITORS, and responded to by the docent
 - visitor manipulation of objects; reaction of docent
 - visitor initiation of conversation; reaction of docent -
 - ways in which visitors approach a Corner; reaction of docent

Some Specifics: How do visitors initially handle the objects?
Which objects do visitors show interest in? How is interest demonstrated?
What questions are visitors asking docents?
How do visitors get to seats for the beginning of a presentation?
ETC.

THE PRESENTATION

- I. Behaviors INITIATED BY THE DOCENT, and responded to by the visitor
 - A. Subject matter covered; reactions to subject matter by visitors
 - ordering of information
 - selection of information
 - general theme statement
 - accuracy of information

Some Specifics: What parts of the presentation get the most reaction from visitors?
What are the kinds of reactions visitors are making?

- B. Mode of presentation; reactions by visitors
- Questioning (type and content); reaction of visitors
 - Lecturing; reaction of visitors
 - Person(s) to whom the comments are directed ; reaction of visitors

Some Specifics: Do visitors answer questions when asked?
What percentage of the presentation is lecture? discussion?
What kind of language is used? Do children seem to understand?
Are adults addressed through the presentation?
ETC.

- C. Use of objects; reactions by visitors
- Introduction of objects into the presentation; reaction of visitors
 - Discussion of objects; reaction of visitors

Some Specifics: How many objects are used in a presentation?
Do visitors demonstrate the same behaviors in relation
to all of the objects?
How does the docent handle the objects?
When are visitors allowed to examine the objects?
ETC.

II. Behaviors INITIATED BY THE VISITORS, and responded to by the docent

- Questions asked; reaction of docent
- Stories told; reaction of the docent
- Supplemental information offered; reaction of docent
- Use of objects by visitors; reaction of docent

Some Specifics: What kinds of questions do visitors ask?
What kinds of stories are told?
What does a docent do with the information from a story?
Who asks questions?
How and when do visitors handle objects during the presentation?

EXITING THE CORNER

I. Behaviors INITIATED BY THE DOCENT, and responded to by the visitor

- Ways in which the presentation is concluded; reaction of visitors
- Invitations extended to visitors to look at objects, visit hall; reaction of visitor

Some Specifics: Does the docent invite questions?
Does the docent invite visitors to explore objects?
Does the docent point out points of interest?
Does the docent offer special information to interested visitors?

II. Behaviors INITIATED BY THE VISITORS, and responded to by the docent

- Interactions begun by visitors
- Manipulation of objects by visitors

Some Specifics: Which objects are explored at the end of the presentation?
Who visits all or part of the exhibit hall?
Who asks questions? What are the questions about?
What kinds of interactions are taking place among audience members?

ENVIRONMENT/LOGISTICS OBSERVATIONS

Observations of the environment should allow us to focus on a description of the Discovery Corner areas as well as a description of the ways in which the environment is used during presentations.

REPORT ON NOISE LEVEL

- list sources of noise
- list ways in which noise influences a presentation
- list comments by docents or visitors about the noise
- list ways in which participants adapt to the noise

DISTRACTIONS TO PRESENTATION

- list distractions
- list visitor reactions to distractions (ignore, direct attention toward distraction, attend more obviously to docent, etc.)

ATTENDANCE AT PRESENTATIONS

- number of visitors at beginning of presentation
- number of visitors joining a presentation
- number of visitors leaving a presentation before its conclusion
- number of visitors attending entire presentation

PHYSICAL ARRANGEMENT

- how was the area arranged with furniture, etc.
- where did people participate from? sitting, standing, etc.
- what do visitors do if all of the "official" spots are taken in the Corner?
- note how the docent used the space of the Corner -- how much of the area was used? how much movement was there by the docent? how much movement was there by the visitors?

PROPS

- what props, other than the objects, were available?
- which props were used?

THE CORNERS DURING OFF HOURS

- what do the Corners look like when they are not being used for presentations?
- what comments do passersby make in relation to a closed Corner?

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